

In another embodiment, the charging port **34** can be external to the trailer.

On top of the base **20** or the frame if no base is used, a skid **45** is installed, which can be in the shape of a table or L-shaped structure for supporting machines contained in the enclosure **26**. The skid **45** can be removably fastened in the enclosure **26**. The skid can be made from steel.

In embodiments, a plurality of pumps **36a-36e** can be installed over the skid **45**.

The plurality of pumps can be connected in parallel to each other each receiving chemicals from a different chemical tote of the adjacent structure **35**.

In embodiments, the trailer and the plurality of pumps **36a-36e** are electrically connected to a power supply **50**.

The pumping rate of each pump **36a-36e** can range from 0.5 gallons per hour to 250 gallons per hour. In embodiments, the pumps **36a-36e** can be remotely controlled by connecting to a cell phone of an operator. In another embodiment, the pumps can be remotely controlled by a wired pendant station, with on, off, and an ability to increase or reduce flow rates by an operator.

A controller **40** is installed in the automated water treatment trailer that is in communication with each of the pumps **36a-36e**.

In embodiments, the pumps **36a-36e**, controller **40** and the charging port **34** can connect to the power supply **50**. The power supply can be a generator, such as a gas generator.

Also, the power supply **50** can be another portable power supply such as solar cells mounted to the outside of the enclosure connected to a battery bank mounted inside the automated water treatment trailer.

Connected to each pump **36a-36e** is a pressure gauge **44a-44e**.

The pressure gauges **44a-44e** can measure from one psi to 350 psi as the pumps move the chemicals to the discharge port.

Exemplary pressure gauges **44a-44e** can be made by Prominent Pumps of Pittsburgh, Pa.

Each pressure gauge **44a-44e** measures discharge fluid flowing from the plurality of pumps.

In embodiments, the manifold **89** can be connected a plurality of valves **52a-52e** that connects to discharge ports **30a-30e**. Each valve **52a-52e** is fluidly connected to one of the plurality of suction port **32a-32e**.

Each valve **52a-52e** can connect to one of a plurality of back pressure valves **54a-54e**.

In an embodiment, the valve **52a-52e** can be a ball valve, a check valve, a butterfly valve, a rotary valve or a three way valve.

Each back pressure valve **54a-54e** is mounted between one of the valves and a suction port.

The automated water treatment trailer connects between a discharge fluid source and a water pipe to automatically provide different fluid flows at remotely controllable pressures using fluid characteristics and specific gravity and pressure in the water pipe.

FIG. 2A depicts a detail of the plurality of pumps connected to the controller which are mounted inside the trailer.

The plurality of pumps **36a-36e** are connected in parallel and in this embodiment shown mounted to a skid.

In embodiments, a controller **40** is in communication with each of the pumps and further in communication bidirectionally with a network.

The controller **40** and the pumps **36a-36e** are electrically connected to a power supply **50** which can be a diesel generator.

In embodiments, each pump **36a-36e** is connected to a plurality of pressure gauges **44a-44e**.

Each pump **36a-36e** can have a separate pump controller **80a-80e**.

The power supply **50** may connect to a plurality of surge protectors **31a-31e**. The surge protectors **31a-31e** can protect each pump.

The surge protector can be a General Electric surge protector for AC power surges.

FIG. 2B depicts a detail of a pump controller **80**.

The pump controller **80** contains a display **82**, a flow meter, **83**, a pump stroke counter **84** (showing 14 strokes have been counted), a power indicator **85** which can be a light that is on, when the pump is on, an increase flow button **86**, a decrease flow button **87**, and an alarm indicator **88** which indicates when the pump is operating less than or greater than preset limits. The alarm indicator can be a light.

The display **82** can be a touch screen display.

The flow meter **83** quantifies bulk fluid movement. Fluid flow can be measured in a variety of ways. Positive-displacement flow meters accumulate a fixed volume of fluid and then count the number of times the volume is filled to measure flow. Other flow measurement methods rely on forces produced by the flowing stream as it overcomes a known constriction, to indirectly calculate flow. Both types of flow meters can be used herein. Flow may be measured by measuring the velocity of fluid over a known area.

The pump rate of flow may be modified using the formula to convert Barrels per minute and ppm to Gallons per hour to adjust flow rate on the pump display. The formula, which is $GPH = (bbls/min) * 42 * ppm / 1000000 * 60$ establishes the correct rate to set the pump. Stroke length and stroke time also need to be set to precisely measure the correct amount of chemical/fluid pumped.

FIG. 3 depicts a diagram of the automated water treatment trailer **8** with a controller **40** powered by a power supply **50** in wireless communication with the network **42** for remote control of the trailer from client devices **99a** and **99b**.

The controller can further communicate with a network that further communicates with a plurality of client devices **99a** and **99b** for remote control, all simultaneously.

The client device **99a** can be a laptop, a cell phone, a cloud based processor, a tablet, or another wearable computer.

The controller **40** can be a programmable logic circuit, or a laptop, or another portable processing device that has processor in communication with data storage that is a computer readable device with non-evanescent memory, and a display.

The controller **40** provides bidirectional communication with a network.

The network **42** can be a satellite network, a global communication network, or a cellular network.

FIG. 4 is a diagram of the steps of a method according to one or more embodiments.

The following is an exemplary method for automated treatment of water in a pipeline.

The method for automated treatment of water in a pipeline can include, but is not limited to the steps described below. The method can be utilized by a person of ordinary skill in the industry, and is not limited to a particular order or sequence.

The method involves connecting suction ports to chemical totes using suction conduits, as shown in box **200**.

The method involves priming up suction conduits connected to suction ports by opening chemical tote valves connected in series to chemical totes, as shown in box **204**.